JP9155185A: NOX ABSORBENT, MANUFACTURE THEREOF AND DEVICE USING NOX ABSORBENT

View Images (1 pages)

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Abstract: **Problem to be solved**: To obtain an NOx absorbent capable of efficiently absorbing/removing a low concentration of NOx contained in a combustion exhaust gas by adding the oxide of one type of element selected from among iron, nickel, manganese, copper, cobalt, chromium and zinc to a porous alumina as a main component.
Solution: A lowly concentrated NOx absorbent is formed of a porous alumina as a main component and the oxide of element selected from iron, nickel, manganese and cobalt borne by the porous alumina. In this case, the average pore diameter or/and the peak pore diameter of the porous alumina are 0.2-10nm and the pore volume is 0.03cc/g. Further, this lowly concentrated NOx absorbent is caused to release the once absorbed NOx by heating the absorbent at 300-600°C. Besides, the NOx absorbent is capable of maintaining the NOx removing rate at 80% or more in the air at a space velocity of 10.324h-1 and a linear velocity of 39cm/s and under other atmospheric conditions such as NOx concentration of 3.0ppm, moisture concentration of 1.5% and temperature of 25°C. This NOx-removing rate should persist for 10 hours or more.

Foreign References: **none**